



THE JACG NEWSLETTER

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THE JERSEY ATARI COMPUTER GROUP

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FROM THE EDITOR'S DESK

This month the Newsletter is back to a "normal" size. Many thanks to our many contributors. Z*NET continues to be a welcome addition and enhancement. Just got back from a well-needed vacation in Europe. What's up with ATARI 'over there'? Well, I saw absolutely NO software bargains (in fact GEMINI, right here in NJ had every title beat in price!), nor did I see titles unavailable here...but hardware prices in Germany were on a par with those in the U.S. I refer here to the ST, as I saw very little 8-bit ATARI "stuff".

Relative to Newsletter submissions...although I try VERY hard to 'force-fit' submissions into word processors that I commonly use...it becomes quite frustrating and time consuming, at times, to do so. Stripping myriad control characters and carriage returns from files, especially late at night, is not totally un-stressful. If 8-bit generated submissions are done on ATARI WRITER (regular or PLUS), and ST-generated submissions are done on ST WRITER or FIRST WORD...your editor's task would be considerably lightened...if you must utilize other word processors...please make EVERY attempt to refrain from the utilization of control characters, and carriage returns (unless absolutely necessary)...thank you!

D. B. Morris

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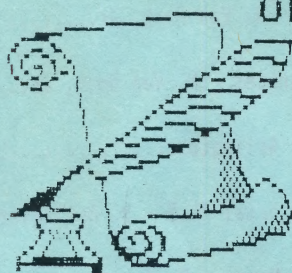
CALENDAR OF EVENTS

NEXT MEETING

JUNE 10, 1989

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1st class	\$152.00	\$977.00

Library Sales

8 bit	\$519.00	
16 bit	\$340.00	\$859.00

Advertising

\$96.00

Newletter Sales

Misc. Income

\$3.00 \$1,935.00

EXPENSES:

Postage

\$170.93

Newletter

\$731.48

Disks for Library

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Communications

Awards and Prizes

Misc. Supplies

Computer Show

Computer Repair

Bank Charges

\$14.03

Sales Tax

\$32.32

\$948.76

BALANCE IN NATIONAL COMMUNITY BANK 3/31/89

\$1,501.04

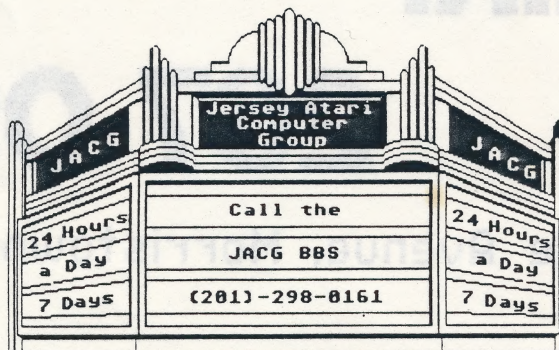
=====

Respectfully Submitted,

Jack S. Rutt

Jack S. Rutt

Treasurer



New Stuff

Neil Van Oost Jr. - JACG

A couple of weeks ago I sent off and received my "CONVERTER COMPANION". This is another fine picture converting utility disk for all you "Picture Junkies" out there who have wanted to move your pictures between programs which support different picture formats. The "Converter Companion" and the original "Converter", programmed by Chris Wareham of Shepherd Software in conjunction with Ed Kielbasinski of No Frills Software, have done it again with this fine set of utilities.

The "Converter Companion" with the "Converter" now allow you to convert between: Newsroom Clipart, Newsroom Photos, Micro Painter, Micro Illustrator, Print Shop Borders, and Hi-Tech Graphics to Micro Painter, Hi-Tech Graphics, Newsroom Clipart and Print Shop Graphics. The "Companion" program is divided into two parts because of the amount of memory required. The first part will load Clipart, Photos, Micro Painter, Micro Illustrator and Print Shop Borders and save them to Micro Painter (GR.8) and Print Shop Graphics. The second half will load Micro Painter and Micro Illustrator and save to Clip Art and Hi-Tech AwardWare Graphics.

In order to get to the picture format you want, you may have to go through several conversion processes. A good rule of thumb to remember is, "If you can get it into Micro Painter (Gr.8) format, you can convert it into almost any other format". I found the program user friendly and fairly simple to use. The first week I had it, I converted a bunch of Micro Illustrator picture files to ClipArt, turning out six disk sides in four evenings. The only thing I was able to find a minor problem with, was when you save an entire MI picture to an entire ClipArt panel without cropping it just a little, you may have some problems loading it into Newsroom. This happened to me a couple of times, but after several tries I was able to succeed in using the panel.

The "Converter Companion" and "Converter" (current version is 1.5) may be ordered from: NO FRILLS SOFTWARE, 800 East 23rd Street, Kearney, NE 68847. (phone 308-234-6250) The cost is only \$19.95 each, plus \$2.00 for shipping. I consider this an excellent addition to my picture utility workshop. When ordering remember to mention that you read about it here in the JACG news letter.

PICTURE JUNKIES PLAY TIME

Neil Van Oost Jr. - JACG

Here I am again with some good news for all you PICTURE JUNKIES out there. Check out the April issue of A.N.A.L.O.G., on page 76 you will find an article, with type in software, by Stephen Miller on "Pixel Averaging on the Atari". Pixel averaging is very useful for smoothing out those jagged lines in computer created pictures.

Especially (lets face it) the lower resolution pictures of 8-bit machines. Now I'm not saying that we don't have great graphic abilities on our Ataries -- but those jaggies do creep into ANTIC Mode E pictures created by "MicroPainter, Atari Artist, Koala Pad, etc".

Stephen Miller has created a program which not only smooths out those jagged lines but has some other fantastic effects. Some of these are the abilities to Replace-PIXAVing - blend colors, Add-PIXAVing - make light areas dark and dark areas light, Subtract-PIXAVing - the edges of objects in the picture tend to become light while the rest of the picture becomes dark, AND-PIXAVing - which works much like replace, but the light areas are prevented from encroaching on the dark areas, OR-PIXALing - which also works like replace, but the dark areas don't enroach on the light ones, and EOR-PIXAVing - which shows absolute differences between the original and the new.

I experimented with the program on some of the Mandelbrot Set pics we played around with several months back. The first thing the program dose is to convert all colors to shades of grey, all work is done on a grey scale picture. When you select PIXAV and what you want to do in PIXAV (you can work with two screens at once), replace, AND, OR, etc. the picture blanks for about 1 1/2 minutes (pretty fast considering all the work that is done). You can now view you creation, save it or preform some more PIXAV magic on it.

There were a couple of things about the program that I did not like (ya can't please everyone). For one thing I could not get two pictures loaded into my 800 (no problem with my 130XE). No problem I could still work with one picture. The reason may have been any one of the modifications I have installed on it. The other thing I didn't like was the save routine. I wound up writing over a couple of my original pictures before I realized what was happening. So I would suggest one of two things, either work with a copy of the picture you intend to use, or modify the output routine (as I did).

There are many ways to use this program and I am still exploring them. So far it has given me quite a few hours

of pleasure and fun and if YOU are a PICTURE JUNKIE like me I am sure it will delight you as it did me. After I have had a couple of months more to play with it, I'll see what I can do in the way of a demonstration at one of the club meetings. Until then this is your favorite PICTURE JUNKIE signing off until next time.

P.S. My thanks to Stephen Miller for a great program. You all make sure to grab a copy of the April A.N.A.L.O.G. just to play with this one.

PREPX
SpartaDos X
Disk Preparer

Dave Arlington - JACG

No doubt, the premium product release for the Atari 8-bits in 1989 is and will be the SpartaDos X cartridge from ICD, Inc. There will be plenty of words written about it this year, but one of its most powerful capabilities is that you can custom configure the Dos to your system using a file called CONFIG.SYS.

As a startoff point, the SpartaDos X cart itself has a default CONFIG.SYS file burned into its ROM that is installed if you do not provide your own on disk or if you hold down the option key while booting. Since ICD has no way of knowing the system configuration of every purchaser, they took their best shot when deciding what to include or not include in the default CONFIG.SYS file.

Since chances are the default CONFIG.SYS file will not be exactly right for your system, it really makes sense to write the one sector CONFIG.SYS file to each disk you have. There are several reasons you might want to do this. First, every device driver you load that you don't need or want takes up memory. For instance, the default file loads both CLOCK.SYS and JIFFY.SYS even though you only need one or the other depending on whether you have an R-Time 8 cartridge or not. Secondly, it is annoying to continually see messages like "R-Time 8 not present" or "Error while saving memory" for options you don't have present. Lastly, even when the options apply, I question some of the default choices. On a stock 130XE, the extra memory is made available for programming with Basic XE, rather than being used for a RAMdisk. I think most users would prefer the RAMdisk. When a RAMdisk is installed, it is put on Drive 9, inconvenient if all your software using RAMdisks is set up for Drive 8.

After hopefully imparting the wisdom of creating your own custom CONFIG.SYS files, let me explain what PREPX will do for you. To avoid creating your own CONFIG.SYS files by hand or creating one and having to copy it to many disks, PREPX will let you prepare as many disks as you want in one session. You need only press a couple of keys to customize your disks exactly the way you want them. You can use it to format disks for new storage. If you have 2 free sectors on your old disks, PREPX will write the custom CONFIG.SYS and/or AUTOEXEC.BAT files and then hide them so your directories will not change. If you

type the program in using the Action! cartridge, you can even change PREPX's defaults to match your own special system.

Following are the valid keystrokes and a brief explanation of some of SpartaDos X tricks of the trade:

M - Memory Change. Defaults to 48K for Atari 400/800, 128K for XL/XE models. Every time you press M, the memory size changes to tell PREPX how much memory your system has. The options are 48K, 64K, 128K, and Extnd for anything over 128K. Every time you switch from Extnd to 48K or from 64K to 128K, the defaults for RAMdisk, BASIC memory save, and Cartridge memory save will change. The defaults for all 3 are (N)one for 48K and 64K, and Drive 8 for 128K and Extnd.

R - RAMdisk. This allows you to set the drive number or (N)one for any internal RAMdisks. Since this refers to internal RAMdisks and not devices like the MIO board, you will not be allowed to specify a drive number if the memory toggle is set to 48K or 64K. To use the 130XE's extra memory for BASIC XE programming, set memory to 128K and RAMdisk to (N)one. Note, every time you change the RAMdisk setting, the BASIC memory save and Cartridge memory save also change to the same option. To toggle these separate from the RAMdisk, toggle these AFTER setting the RAMdisk option.

B - BASIC memory save and
C - Cartridge memory save. This allows you to set the drive number or (N)one for these memory saves. Unlike internal RAMdisks, these can be saved to floppy drives, hard drives, or MIO RAMdisks, so these two toggles are available in 48K or 64K mode. However, a word of caution before you designate the memory saves to a floppy drive. Any time you change memory AT ALL, SpartaDos X saves the whole chunk of memory to disk. For instance, if you load a 32K BASIC program and then type NEW, SpartaDos X will save the whole 32K block of memory anyway since all it sees is that memory has been changed in some way. So use these options with caution with floppy drives.

A - AtariDos Access. Toggles (Y)es or (N)o. If you want to be able to read and write to or from disks with a standard Atari DOS format (standard meaning DOS 2.0, 2.5, MyDos, SmartDos, Dos XL, but not DOS 3 or DOSXE), leave this option at (Y)es.

S - High Speed. If you own a Happy or Indus disk drive, leave this at (Y)es for high speed read/writes. Actually, since the Indus driver takes up no memory, it doesn't waste memory to leave this at (Y)es even if you don't have an Indus or Happy drive.

T - R-Time 8 Cartridge. Uses CLOCK.SYS driver if set at

(Y)es, JIFFY.SYS if set at (N)o.

H - Hide CONFIG.SYS file. If set at (Y)es, the CONFIG.SYS file and/or AUTOEXEC.BAT files will be hidden after being written. There are two nice things about hidden files under SpartaDos X. First, it acts like protecting these files since you cannot overwrite them accidentally when using PREPX. Secondly, you won't have the same two files cluttering up every disk directory like DOS.SYS and DUP.SYS always did with DOS 2.5. The only files that have to be seen on a SpartaDos X disk are your actual data and program files. How nice!

P, D - Prompt and Path Display respectively. Hitting either of these two keys, turns on the cursor in the proper field. You may type in text until you either hit RETURN or reach the end of the edit field area. No real edit checking is done, so what you type is what you'll get. Note the PATH will still always begin with CAR: and edit-checking of the \$ symbol in the Prompt is not done for those who want actual \$ symbols in their prompt.

X - XEP-80. Toggle to (Y)es if you want XEP-80 support, leave at (N)o otherwise.

The last four options are interrelated in that they cover popular options on boot-up that are handled in an AUTOEXEC.BAT file rather than in CONFIG.SYS:

W - Write AUTOEXEC.BAT. If set at (N)o, defaults change to Key Buffer: Off, Left Margin: 2, Prompt for Time/Date: N and these defaults cannot be changed. Conversely, if set at (Y)es and the above three values are in place for the K, L, and I options, the AUTOEXEC.BAT will not be written.

K - Keyboard Buffer. Toggles On or Off the type-ahead keyboard buffer. The SpartaDos X default is Key Off, unlike SpartaDos 3.2d. Also unlike SpartaDos 3.2d, when the keyboard buffer IS on, the key repeat rate IS NOT speeded up so you can now use the keyboard buffer with Action! for instance. Note the PREPX default is On. This buffer can interfere with some software, so turn it off if you have problems.

L - Left Margin. Toggles to 0 or 2. PREPX default is 0, default without AUTOEXEC.BAT is 2.

I - Initialize Time/Date. If set to (Y)es, you will be prompted to enter time and date on boot-up, like an MS-DOS machine. If you indicated you have an R-Time 8 cartridge, this will be set to (N)o and you will not be allowed to change it.

When you have selected all your options, press START to continue. The ICD SpartaDos X format menu comes up. If

you wish to format the disk, enter the relevant information and press F. If you only wish to write the CONFIG.SYS and/or AUTOEXEC.BAT files to a disk that has already been formatted, press ESCape. When done, you will be returned to the PREPX options menu. From here you may set up for another disk or press ESCape to exit the program.

Behind The Scenes

The program is pretty straightforward. If you wish to set the initial parameters to fit your own needs, you need only make a couple changes to InitVar() and DrawScreen().

CheckOption() reads the key pressed and branches to the proper handling section. WriteOptions() calls the SpartaDos X format routine and then writes the actual files.

For the prompt and path options, I could not get the library procedure InputS() to work properly, hence my own limited GetS() procedure.

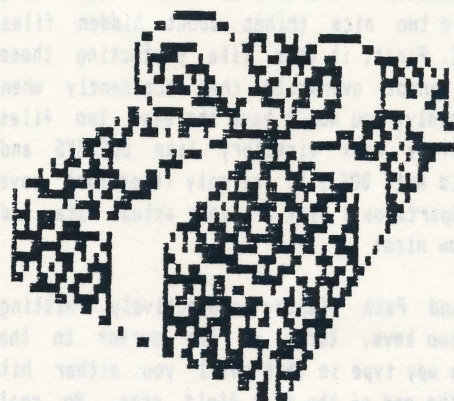
The Toggle() procedure might be of interest to beginning Action! programmers since it covers a technique familiar to C programmers, but one that is not mentioned anywhere in the Action! manual. Unlike BASIC, when you pass variables to an Action! procedure (think of a BASIC subroutine), you are really only passing the VALUE of the variable, not the actual variable itself. This is nice when we want to be sure our main variables are not mysteriously altered by some procedure somewhere.

Sometimes though, as with the Toggle() procedure, we do want access to the variable itself so we can change its value. We do this by passing the ADDRESS of the variable (@hide), instead of the value. The procedure being called then uses a pointer of the same type as the variable. (For instance, in Toggle() we use a BYTE POINTER memloc to hold the address of the variable (a BYTE) being passed.

By using this pointer, we have the same access to the variable we had before, using the ^ operator (as in memloc^, which in this example, is like using the variable hide). The additional benefit is that any changes we make to memloc^ are the same as changing the value of the main variable.

I hope this utility is just the start of a lot of support for the SpartaDos X operating system, and makes customizing your own disks a little easier.

8-Bit Bonanza



Atari 130XE Computer \$ 149.95
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THE ACTION! TUTORIAL

Part 5: Procedures and Functions

Dave Arlington - JACG

CORRECTION FROM LAST MONTH: There was a mistake in last month's article. I had uploaded the corrected version to our erstwhile editor, but somehow the version with the mistake got in the newsletter. In an UNTIL loop, the UNTIL clause appears BEFORE the ending OD as in:

```
DO
;your code goes here
;
UNTIL condition = TRUE
OD
```

My apologies to anyone who was confused if they tried to use it the way I outlined it in the article last month.

Now onto new things. If you notice, this month I have stopped calling this column, 'Action! for BASIC Programmers'. That is because this month we start looking at some of the things that makes Action! so much better than BASIC. Not to worry too much though. I still intend to compare Action! to BASIC concepts you might be familiar with and also provide TURBO BASIC examples where appropriate.

Up until this month, all the Action! programs and examples have been like BASIC in that they consist of one complete PROCEDURE (or program). This was OK because the examples were fairly short and we were trying to get the basic (pun not intended!) concepts of Action! across. That is, variables; how to declare and use them, simple statements, and looping (DO-OD, FOR, WHILE, UNTIL) and conditional (IF - ELSE - ELSEIF - FI) decisions. Now we'll start putting them together into PROCEDURES and FUNCTIONS.

Action!, as with languages like C, Pascal, and LOGO, is a 'structured' programming language that lets us write programs in a 'top-down' style. Let's discuss these buzzwords, for those who might not be familiar with them. A 'structured' language lets us write our programs in small, modular pieces rather than in one huge lump like BASIC. We do this with procedures and functions. Procedures and functions are somewhat like subroutines in BASIC, but have many more advantages as we shall see.

A 'top-down' programming style refers to the method by which we write our program. It begins by looking at the program we want to write as a whole thing and then starting to break it down into smaller, more manageable problems. For instance, as an example of a program we might work on in this series, let's talk about something I mentioned last month, a report generator for SYN-FILE+.

(SYN-FILE+ is an otherwise excellent database program for the Atari 8-bits that is somewhat lacking in different methods of printing out information.)

A program like that in BASIC is likely to be a multi-page epic that would be totally incomprehensible to everyone except the person who wrote it. (And maybe her too after a month or so!!) We can use procedures to break the big task down into littler pieces. A first draft might look something like this:

EXAMPLE 1:

```
;
;SYN-FILE+ Report Generator (draft 1)
;by Dave Arlington
;
```

BYTE ch=764

PROC InitVars()

```
;This will set up any variables.
RETURN
```

PROC TitleScreen()

```
;This will print a title screen
;and then print a menu with six
;choices for the user:
```

```
; (1) Load a previous report
; (2) Create a new report
; (3) Edit report
; (4) Print report
; (5) Save report to disk
; (6) Exit program
```

RETURN

PROC Load()
RETURN

PROC Create()
RETURN

PROC Edit()
RETURN

PROC Print_Report()
RETURN

PROC Save()
RETURN

PROC MenuOption()

```
IF ch=27 THEN ;they pressed (6)
```



```

RETURN
ELSEIF ch=31 THEN ;they pressed (1)
  Load()
ELSEIF ch=30 THEN ;they pressed (2)
  Create()
ELSEIF ch=26 THEN ;they pressed (3)
  Edit()
ELSEIF ch=24 THEN ;they pressed (4)
  Print_Report()
ELSEIF ch=29 THEN ;they pressed (5)
  Save()
FI
; This next line is just for debug.
PrintBE(ch)
RETURN

```

```

PROC main()

InitVars()
TitleScreen()
DO
  ch=255
  DO
    UNTIL ch#255
    OD
  MenuOption()
  UNTIL ch=27
  OD
  ch=255
  Graphics(0)
RETURN

```

Now this program doesn't really do anything yet, but it will compile and run if you type it in. The point here is to provide a skeleton to illustrate some things about putting an Action! program together.

Think of an Action! program as having three main parts; two of them are fairly small. Once we identify them, you will be able to look at any Action! program and pick them out.

The first section is the global variable declaration section. At the very top of any Action! program, you will see a bunch of variable declarations. All the variable declarations that come before the first PROCedure are considered 'global' variables. For you BASIC programmers, global variables should be old hat even if you don't recognize the term.

Global variables are simply variables that can be used by any procedure or function anywhere in the program. In BASIC (and Turbo BASIC) all variables are global since they can be used anywhere in the entire program. These variables can be any of the types we've discussed so far (and of course those we haven't covered yet!). In the sample program above, there is one global variable

declared; a BYTE variable called CH. Remember that the =764 part says not that CH starts out equal to 764, but that we will be storing and reading the variable CH from memory location 764. (I'll explain in a minute.) Since this is a global variable we can use it in both the MAIN procedure and the MENUOPTION procedure. It could also be used in any of the other procedures as well.

In BASIC, global variables can be declared anywhere in a program. This very often leads to confusion and much debugging time. For instance, in a large BASIC program, you might start using a variable called CH completely forgetting you've already used that variable name somewhere else for a completely different purpose. In Action!, we don't have this problem since all the global variables are declared in one place at the beginning of the program. It is very easy to see if you've already used a variable name.

After the global variable section, comes one or more procedures and/or functions. There always has to be at least one procedure in a program. Which leads to the next section of an Action! program we want to look at. The very last procedure in the program is the MAIN procedure. It doesn't have to be called MAIN, although it is in our sample program. What makes this procedure different from all the rest? Well, an Action! program may have many procedures. Action! needs to know which one starts off the whole program. So when you write an Action! program, your program always starts running with the very last procedure. (Of course, if you only have ONE procedure, like our previous sample programs, that is the main program.) The MAIN procedure is NEVER called by any other procedure. All the other procedures that come between the global variable section and the main procedure section are called by either the main procedure or one of the other procedures.

In the sample program, the procedures INITVARS, TITLESCREEN, and MENUOPTION are all called by the main procedure. The procedures LOAD, EDIT, PRINT_REPORT, CREATE, and SAVE are all called by the MENUOPTION procedure.

This month we will look at simple examples of procedures; how to declare them, how to call them, and what parts they need. Next month, we'll cover the more complicated parts of procedures (local variables and parameters) and explain how functions are different from procedures. I want to split this topic into two parts and explain it very carefully for a good reason. If you can follow the next two installments of this column (including this one), you will know 90% of what you need to know to write really functional Action! programs. The tutorials after that will be getting into intermediate to advanced topics. So bear with me for the next two months and I think you'll find it worth it.

You create (or declare) a procedure in this way: The first line starts with the word PROC followed by the name of the procedure. Immediately at the end of the procedure name is a pair of parentheses. These parentheses can be used to pass parameters to the procedure, something we'll tackle next month. The last line of any procedure should be the word RETURN. Believe it or not, these are the only things that are absolutely mandatory for a procedure. That is why our sample program above will compile and run even though it contains procedures like:

```
PROC Load()  
RETURN
```

Normally though, we have some other things we like to include in a procedure to make it more useful. We can include parameters in the parentheses as mentioned above, we can tell Action! where to find our procedure in memory (a very advanced topic we'll cover someday). The vast majority of procedures though, consist of two sections between the line with PROC on it and the RETURN. The first section is a local variable declaration section. We'll cover local variables in detail next month, but for now think of this section of a procedure as being just like the global variable section of the whole program with one exception. The global variables declared at the top of our Action! program can be used by ANY procedure, while the local variables declared inside of a procedure can be used by that procedure ONLY.

The second section of a procedure is the statement section of the procedure. These are the lines of the Action! procedure that do the actual work. The variable section of a procedure comes first followed by the statement section. Note that as I mentioned above, neither section is required, both are optional. In the sample program above, most of the procedures have neither section. Both the MENUOPTION procedure and the MAIN procedure have only statement sections, they do not have any variable declaration sections.

Let's look at what happens when an Action! program starts running when you hit R after compiling. First, it skips down to the very last procedure. If there is a local variable section, it sets up those variables. Then it goes to the statement section and starts executing the statements one by one. If it runs into a procedure call, then it jumps to the named procedure and starts doing the same thing there. When a RETURN statement is reached, one of two things happen. If it is reached in a procedure that was called by some other procedure, then control is returned to the calling procedure. If it is reached in the MAIN procedure, then the program ends and control is returned to either the Action! cartridge or DOS, depending on where you are.

Let's step through the sample program and see what happens. First, during compiling, a global variable is set up called CH and it stored at memory location 764. OK, I said I would explain that. Memory location 764 holds the value of the last key pressed on the keyboard. This value is some internal hardware code that unfortunately has no rhyme or reason attached to what numbers you get when you press a key. What I mean, is the number returned by this memory location doesn't have anything to do with ATASCII codes or alphabetical order or anything. So why do I use it? Well, it does have one nice property. This location holds a 255 until a key is pressed. So by constantly looking at this memory location, we will know as soon as it does not have a 255 in it, that the user has pressed a key. The other nice property about this location is that if the CAPS Lower key is pressed by mistake a lower-case A will return the same value as an upper-case A. This saves us a lot of edit type checking that we would have to do if we used a regular key read routine like GetD(). Since this memory location returns weird values, you might be wondering how I knew what numbers I would get when certain keys were pressed. Well, I used the scientific method of pressing keys and writing down what numbers I got.

Anyway, on to the main procedure. First, it calls the INITVARS procedure. Right now, this doesn't do anything. I might not even need it in this program, but usually I like one procedure that sets up any initial variable values and reserves blocks of memory if needed. So it is here in case we need it in the future.

Next the TITLESCEEN procedure is called. Another do-nothing routine, eventually this procedure will put out a title screen and then present the initial menu. We then go into a DO-UNTIL loop that monitors location 764, our CH variable, until it equals 27, which means that Menu Option (6) QUIT has been pressed. The inside of the loop works like this. First, we put a 255 into the CH variable to clear memory location 764 and tell the computer that no key is being pressed at the moment. We then enter a DO-UNTIL loop that continually loops until CH equals anything other than 255, telling us a key had been pressed.

The MENUOPTION procedure is then called. Depending on what key has been pressed, we call another procedure to handle the option they've selected. Note something interesting if they press menu option (6) (CH=27). If they select this option, we immediately RETURN from the procedure without executing any of the other statement lines. The point here is that you can put the RETURN statement anywhere in your procedure as many times as you want. As soon as it hits a RETURN, everything stops in the procedure and returns to the calling procedure. You should always make sure to have a RETURN at the very end of your procedure though, so the Action! compiler won't get confused when it tries to compile your program. Th

PrintBE(ch) at the end of the MENUOPTION procedure is simply there in case you want to fool around with pressing keys and seeing what values you get from location 764.

If they press any other key than one of the valid menu options, none of the IF-ELSEIF-FI cases will do anything and we will just exit from the MENUOPTION procedure. Our outer DO-UNTIL loop will continue to keep accepting keypresses until a 6 (CH=27) is pressed. Then we clear location 764 with a 255 and do a Graphics(0) call to clear the screen before we end the program and return to either DOS or the Action! cartridge.

Now, in the fine tradition of this column, I will mention some special things about procedures that are not mentioned anywhere in the Action! manual. First, if one procedure calls another one, the called procedure must be situated within your program before the calling procedure. For example, in the sample program, the LOAD procedure has to be located before the MENUOPTION procedure. If you put them the other way around, you will get a compiler error when you try to compile it. The other thing that Action! does not allow is recursive procedures. That is you cannot call a procedure from within the same procedure. For instance, the MENUOPTION procedure could not include a call to itself.

A few comparisons to BASIC subroutines can be made this month. First, since Action! does not use line numbers, you can use the same procedure in many programs without worrying about conflicting line numbers. You also do not have to worry about what line number the procedure starts at since you just call them by name. In TURBO BASIC you can call procedures by name, but you still have to worry about conflicting line numbers if you use them in different programs.

Next month when we cover parameters and local variables, you will begin to see the real advantage of procedures over BASIC subroutines. While waiting for next month, try playing around with writing your own multi-procedure program, or fiddle around with the skeleton I've given you here. Remember to think of your program in broad terms at first, and then try breaking it into smaller pieces. Try to picture what you want the pieces to do, rather than how you are going to do it. If you've programmed a lot in BASIC, it might be a little difficult at first, but eventually you'll find it much easier to write your programs. Till next time!

NOISE FROM NOYES

by Dave Noyes

This month I highly recommend the 8-bit Disk of the Month, the disk from PAGE 6's issue #36. As you may know, PAGE 6 is an all ATARI newsletter of magazine proportion, from the U.K. It has combined with another U.K. newsletter (ATARI USER). We are allowed to provide this fine public domain material as long as it remains intact and credit is given to PAGE 6. The programs are SYNTH II, HEADBANGER, DESIGNER KEYS, FLIGHT LOG, MUSIC BOX and STAR RIDER. A disk bonus, COLOUR ENHANCER, is also included. I will attempt to type a brief description of each to be inserted in the jacket with the disk...enjoy!

As I have mentioned several times in the past...the best way to protect and justify our investments in ATARI and ATARI related products, is to continue to support our local retailers. A glance through our Newsletter will show those retailers who support the JACG.

The JACG has an excellent BBS - (201)298-0161. The D/L area is used quite frequently...but I notice an apparent hesitancy to use the message base. Let's talk it up, folks! Also, as you acquire public domain files...please u/l them if not already in the file area.

...til next month...



C'mon!
Don't be Shy.
Write an
Article for
the JACG
Newsletter!

In a recent JACG Newsletter I related a true story of my Uncle Jake's adventures while working for Tom Edison. During that time he had such great results in teaching Tom and his staff everything anyone ever knew about electricity that he went on to write several articles on the nature of electricity for every prominent scientific journal of the time.

Reprinted here is one of Uncle Jake's best.

Ray Golowach - JACG

ELECTRICITY

What is electricity...and where does it go when it leaves the toaster? Here is a simple experiment that will teach you an important electrical lesson: On a cool, dry day, scuff your feet along a carpet, then reach into a friend's mouth and touch one of his dental fillings. Notice how your friend twitches violently and cries out in pain. This teaches us that electricity can be a very powerful force, but we must never use it to hurt others unless we need to learn an important electrical lesson.

It also teaches us how an electrical circuit works. When you scuffed your feet, you picked up batches of "electrons," which are very small objects that carpet makers weave into the carpet so they will attract dirt. The electrons travel through your blood-stream and collect in your finger, where they form a spark that leaps to your friend's filling, then travel down to his feet and back into the carpet, thus completing the circuit.

AMAZING ELECTRONIC FACT

If you scuffed your feet long enough without touching anything, you could build up so many electrons that your finger would explode! But this is nothing to worry about, unless you have carpeting.

Although we modern folks tend to take our electric lights, radios, mixers, and toothbrushes for granted, hundreds of years ago people did not have any of these things...which is just as well because there was no place to plug them in. Then, along came the first Electrical Pioneer, Benjamin Franklin, who flew a kite in a lightning storm and received a serious electrical shock. This proved that lightning was powered by the same force as carpets, but it also damaged Franklin's brain so severely that he started speaking only in incomprehensible maxims such as, "A penny saved is a penny earned." Eventually, he had to be given a job running the post office.

After Franklin came a herd of Electrical Pioneers whose names have become part of our electrical terminology: Myron Volt, Mary Louise Amp, James Watt, Bob Transformer, etc. These pioneers conducted many important

electrical experiments. Among them, Galvani discovered (this is the truth) that when he attached two different kinds of metal to the leg of a frog, an electrical current developed and the frog's leg kicked, even though it was no longer attached to the frog, which was dead anyway. Galvani's discovery led to enormous advances in the field of amphibian medicine. Today, skilled veterinary surgeons can take a frog that has been seriously injured or killed, implant pieces of metal in its muscles, and watch it hop back into the pond...almost.

But the greatest Electrical Pioneer of them all was Thomas Edison who was a brilliant inventor despite the fact that he had little formal education and lived in New Jersey. Edison's first major invention in 1877 was the phonograph, which could soon be found in thousands of American homes, where it basically sat until 1923, when the record was invented. But Edison's greatest achievement came in 1879 when he invented the electric company. Edison's design was a brilliant adaption of the simple electrical circuit: the electric company sends electricity through a wire to a customer, then immediately gets the electricity back through another wire, then (this is the brilliant part) sends it right back to the customer again.

This means that an electric company can sell a customer the same batch of electricity thousands of times a day and never get caught, since very few customers take the time to examine their electricity closely. In fact, the last year any new electricity was generated was 1937.

Today, thanks to men like Edison and Franklin, and frogs like Galvani's, we receive almost unlimited benefits from electricity. For example, in the past decade scientists have developed the laser, an electronic appliance so powerful that it can vaporize a bulldozer 2000 yards away, yet so precise that doctors can use it to perform delicate operations to the human eyeball, provided they remember to change the power setting from "Bulldozer" to "Eyeball."

Don't Give Up the Ship!



Write an Article for the JACG.

ZMAGAZINE'S



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May 1989

Vol. 1 No. 3

ATARI SHOWS "READINESS" AT COMDEX

by John Nagy

At the very first COMDEX business computer dealer show in Chicago, Atari fielded a large display of third party developers and their own new products. The most unique thing about this COMDEX for Atari was that READINESS was the watchword. Every new product and software item being shown is promised for commercial distribution within the next 90 days.

The star of the show was the STACY laptop ST, in a one-meg one-floppy package that will sell for \$1,500. It will sport the full MEGA operating system, even down to the MIDI port which has traveling musicians excited! The LCD screen is very clear and has the same resolution as the Atari monochrome monitor, although not as pleasant to read. Unfortunately, this potential dealer-grabber sat, without fanfare, on folding tables in the dark center of the underwelming but sizable Atari exhibit. Although people in the know at booths throughout the show were aware and intrigued by the Stacy, mainline dealers could have easily missed it. The Stacy is in tooling now, and will be in production in June or July.

The Portfolio, a flip open breast pocket marvel with a full (but tiny) keyboard, runs MS DOS from "B-cards" that look like Sega game cards. It has 128K on board, with up to 640K via RAM and ROM cards. The Portfolio (the name "Folio" is "out") sports internal spreadsheet, database, and word processor. Built in the UK by DIP in cooperation with ATARI, it should be very popular at \$399 retail. Porting data can be done with accessory smart cables. The keyboard has moving keys, just big enough to make typing with more than one finger quite possible. Like the Stacy, the Portfolio was not played up by the Atari display, but was still discussed in far corners of the COMDEX show. The Portfolio will be in

production by the time most of you read this in May.

Other products being shown by Atari included a 286 IBM Clone (PC-4), 12mhz with VGA and one meg onboard, and the Megafile 44 removable media hard drive.

Atari Software showed DESKSET II, what looked to be a good competitor in the growing ST Desktop Publishing market, as well as WORDFLAIR, sort of a cross between desktop publishing and a good word processor. This \$149 package is expected to meet the needs of many home users who simply don't need the power to publish books, but want more than a word processor. Atari also showed their growing Scholastic series of educational ST software.

Third party developers really carried the bulk of the Atari display, with appearances by Migraph, Michtron, ISD, ICD, Bentley, Antic, Abacus, SoftLogik, Word Perfect, Mark Williams, LDW, Gadgets by Small, Computer Avenue, and more. A variety of new software titles were demoed, all of which are to be available in the same 90 day timeframe. The only Atari 8-bit presence was in the form of literature for the ICD 8-bit line, sitting with the ICD ST materials.

Impressive displays were also given by ViewTouch, showing a touch screen system ideal for restaurants and other retail operations, and by Biodata Networking, with a \$600 Ethernet connection for the ST (through the DMA cable). Ambrosia showed the only entertainment oriented software at the Atari exhibit in their Radio Controlled Helicopter simulator.

In short, developers were encouraged by the efforts being made by Atari to regain the US market, but little dealer action - the real point of COMDEX - was seen on the COMDEX floor. ■

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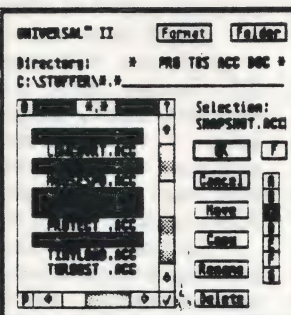
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☞ In what must have seemed like fun at the time, a few Atari and GENie telecommunication system employees wrote up a bogus "press release" from UPI and directed all users to immediately go and download the release. Billed as "important news that will affect all Atari owners", nearly a thousand users rushed to read it. The April Fools prank detailed how Atari had sold the 8-bit and game line to Coleco Toy Company, was moving its corporate headquarters to Germany, and was introducing a new workstation called the Atari FU. A close reading turns up countless clues to the absurdities, but even media people were taken in at first. No blatant clue to it being an April Fool joke was included, and quick readers simply assumed that their worst fears were coming true. Atari reported lots of worried calls. Please help quash any leftover doubts. It was supposed to be a joke.

☞ In what we hope is NOT a joke, there appears to be a new "accelerator board" in the making for the ST. It is currently under development by John Russell, the gentleman who produced the JRI Genlock for the Mega ST series. Reportedly, it uses a 16 Mhz 68000, and the speed you can achieve with your system is dependant on the rating of the RAM chips in your ST. Russell has taken the time to add some features to the unit to make it compatible with many of the ST products currently available, most notably the Spectre 128. The Accelerator is slated to be released shortly, and although it has no name yet, its proposed price is under \$100. Another company announced such a device a year ago but has

been unable to deliver.

☞ Cindy Claveran has left Atari. She resigned her position as user-group coordinator to accept a position outside of Atari. No replacement has been announced as yet, and Sig Hartmann is temporarily overseeing her responsibilities.

☞ COMDEX in Chicago and Hannover, Germany's big CEBIT computer show resulted in a bundle of new products announced by Atari; Z*Net's report of COMDEX is on page Z*1.

☞ Version 1.9F of the Spectre 128 software (the MAC emulator for the ST) features SOUND for the first time. You'll be glad that Dave Small allowed you to turn the sound on and off quite easily, as Macaudio slows things down noticeably when the sound is actually playing. Registered Spectre users got a card to send in for the upgrade along with a terrific newsletter, full of entertaining and useful ST-Mac information, from Gadgets by Small.

☞ The "new" Federated Group management team announced a restructuring and consolidation plan for the 60-store electronics chain. The plan includes immediately closing 15 stores, reducing headquarters staff by 30 percent, expanding inventory, upgrading store image, and improving customer service, according to Jim Fisher, V.P. of marketing. Atari recently announced it has reclassified the Federated Group, its wholly owned subsidiary, as a discontinued operation for accounting purposes, and consider several options including a spin-off or leveraged buy out. Eight stores in California, four stores in Arizona, and three stores in Texas have been closed, as well as the company's Dallas

headquarters and warehouse operation. Discussions with major manufacturers have indicated support of the regrouping, which is seen by many as grooming the chain for sale.

☞ Motorola Inc. recently announced the new microprocessor with the fastest clock speed in the industry. It is a 50-MHz version of its 68030 (030) chip. This new chip delivers 12 MIPS (million instructions per second) of performance, double that of all processors available today. Sampling will become available next month with prices starting at \$650.00. Last month Motorola unveiled a new 32-bit microprocessor, the 68040.

☞ Romantic Robot UK LTD of London England recently released MultiFace, an ST cartridge. It can freeze action on any program, save to RAM or floppy after freezing, format and compress disks, alter memory, find and replace strings, tag files, save or load memory. It is also a disk copier that will copy any disk and compress it for faster running. It won't help pirates much though, the copied files cannot be run without the cartridge. No US distribution is as yet arranged.

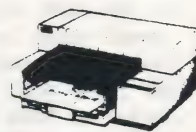
☞ Antic Magazine/Software has taken over U.S. marketing of the GFA product line from Germany, perhaps best known for their GFA BASIC. GFA split from original marketer Michtron when Michtron began to handle Highsoft products.

☞ Effective July 1, 1989, PC Pursuit prices are rising. Along with this GENie and CompuServe have recently announced rate changes. CompuServe rates are rising, and GENie is dropping Prime rates to US

members to \$18.00, with other changes for different baud speeds. For more information on rate schedules, call your favorite service today. Be aware!

☞ Avant-Garde Systems announced the high-speed PC compatible product follow-on to their highly successful pc-ditto, Version 3. This new product is a hardware-based emulator which runs the most popular IBM software on all Atari ST and Mega models with XT compatibility and AT-like performance (three times that of an XT!). PC-Ditto II features include up to 640K usable memory (machines with 1 meg memory or more), monochrome and color graphics capabilities on all Atari monitors. pc-ditto II is available through Atari dealers at the suggested retail price of \$299.95, and the software-only original pc-ditto is still \$89.95. Registered owners of current versions of pc-ditto will receive a coupon worth \$150 towards purchase of pc-ditto II.

☞ The Hewlett-Packard DeskJet, a popular ink jet printer with the quality of a laser printer, will soon be joined by DeskJet Plus. It will print text at twice the 240 cps Draft mode rate of the current DeskJet, and do graphics printing at speeds up to 5 times faster. In addition, the Plus includes more fonts: six additional portrait and four landscape fonts. HP will reduce the price of the current DeskJet by as much as 20% (List is \$795), and introduce the DeskJet Plus at \$995 list. Additional fonts will also be reduced 30%. ■





RATTY'S RAP

Mat**Rat* - Ratware Softworks



The 8bit Ataris are very much alive and well in the eyes of Atari, Chicago. Yes, I said Chicago. On my NATO day celebration (McDonnell Douglas employees get NATO day off, don't you?) I took a 45 minute shuttle flight to Midway Airport in Chicago. I then traveled to Lombard Illinois, about 1/2 hour's drive from Chicago. The limo (hey, on a vacation day you have to travel in STYLE) dropped me off at about 9:30 AM after a (thankfully) uneventful flight. This trip was arranged several months in advance with Larry Seigel, Vice President of Software Development. Larry and Craig Erickson, Executive Producer of Software Development, spent most of the day with me explaining their operation, previewing some upcoming software, and allowing me some time with the rest of their talented crew.

Larry has a background in pin ball machines and coin op video games. He and Jack Tramiel arranged to open up this software development office last June. There wasn't enough room at Sunnyvale for this operation, so it was decided it would be more cost effective to set up the new offices in Chicago. Larry has enjoyed a certain amount of autonomy, generally not afforded those who work at the Sunnyvale offices. This environment seems to be conducive to productivity, minimal turn over rate (something that is mind boggling at the Atari Sunnyvale location), and just plain fun.

Larry convinced the Tramiels that software sells hardware, not the reverse. Most of the kids playing games have no technical expertise. They don't care if Atari has the best hardware. It doesn't sell a single unit. What the kids want (ages 6 to 16, the primary market for Sega, Nintendo, and Atari game capable hardware) are the machines that play the hottest video games which are currently the rage in the coin op realm.

Atari, because of the Tramiels' Commodore background, have historically looked at the game business from the computer point of view. This audience typically owns a computer for doing work at home (about once every 6 months), managing the finances ("right honey"), and playing an occasional game (99% of the time). This audience consists mostly of yuppies (ages 21-35) and more technically oriented teens (ages 17-20) who are into programming. This group is more interested in the strategy and simulation games, where the younger crowd finds this junk incredibly boring.

Atari has made the near fatal mistake of "sitting back" and watching what happens to the game market (where they lost their shirts, before the Tramiels took over) to see what would happen. The Tramiels weren't ready to invest in that fickle, financially dangerous market of video games. In the mean time, Nintendo did a small test market of their machine in New York and, shortly thereafter, took the rest of the US by storm.

Now Atari is saddled with the burden of playing catch up, and it is Larry Seigel's team that is working hard to establish Atari as the video game king it once was. Actually Atari would be content with a "strong second", since there are simply too many Nintendo units already out there.

It takes about a year to take a game from conceptual design to market. Atari Software Development in Chicago will be a year old this June, so expect some exciting things at

the summer CES in Chicago.

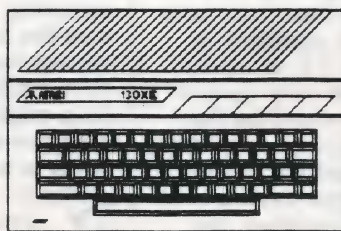
Craig Erickson has a strong background in video gaming, including some of the hottest titles ever released for the Macintosh. He has a "Twilight Zone" twist to his mentality that is a strong driving force behind some of the newest games under development. Atari will say "we need a combat game, Nintendo has Jackal and Commando; we need something like that". However, Craig will insist that, while providing a commando style game, it must be unique, with a twist that will set them apart and make the kids really WANT THIS GAME. In Atari's Viet Nam battle style game, after you shoot some guy in battle fatigues he will mutate into some pretty gruesome aliens. I saw the animations and artwork for the ST and 7800 versions. This game will over exaggerate the violent component of this game, to the point of being funny. This offbeat twist will certainly make it stand out from the crowd.

How about a "golf game" somebody says. "Sure", says Larry and company, "like maybe Ninja Golf, you have to kick the stuffing out of someone before you get to play your hole". I saw the early alfa version of this software and it looks very promising. Don't you HATE waiting for your hole because the folks on the course in front of you are the SLOWEST people in the world? Well, take your frustrations out on them vicariously through a rousing game of Ninja Golf!

What about a "karate game" someone else says. Craig, a practitioner of Quan Moo Chan, says "certainly, how about Rat Kung Fu? All the fighting characters are RATS, not some pixelated Bruce Lee imitation!" I saw the art work for this under development by Bob Nagel, graphic artist; one of the newest members of the group. The concept is hilarious. I can hardly wait to play this game! Craig is working hard to develop more realism in the animations (by digitizing his Quan Moo Chan moves with a video camera, editing them into character form on an ST, and then using this for reference as a game's art work is developed), and add more of a Saturday afternoon cartoon flavor to them. His goals are lofty, but the realities of ROM and RAM space of the machines are limited. I think the end results will be impressive, and refreshingly new.

Stay tuned to your favorite Atari magazine. I will be developing several more detailed reports of this trip, and the software Larry Seigel's team has under construction. Virtually all of these titles and more are in the works are for the ST, XEGS (and XL and XE computers), 7800 and 2600 systems. Where is the application software, you ask? That's not Larry's problem. The charter of Atari Software Development, Chicago, is to produce the hot new games for all of Atari products that people will WANT for their home machines. (Yes, there is even talk about porting some of the hot sellers over to the Nintendo and Sega machines.) From my visit it is obvious that

Atari fully intends to support the XEGS and related computers, the ST, and the 7800/2600 systems for several years to come. As the new games make it to market, Atari will reevaluate their video game strategies under the guidance of Larry Seigel and Craig Erickson. These guys have some pretty sharp ideas! ■



THE CLUB ROOM

by Mike Lechkun

(EDITOR'S NOTE: The CLUB ROOM gives hints and ideas from user groups throughout the world. This month, a Michigan club tells of how they helped themselves by helping their community. If your group does something unique, or has solved a common problem, let everyone know - submit a CLUB ROOM article!)

MAGIC-the Michigan Atari General Information Conference, started similar to many user groups across the country. A group of Atari 8-bit owners in the Detroit area saw a need for further support and banded together. So, in the shadow of super Atari user group MACE, MAGIC began meeting on a regular basis, sponsored a BBS, formed a disk library and newsletter - you know, user group stuff. In 1987, along with Atari, MichTron and several out-state user groups, MAGIC sponsored the Atari Magic show, the most successful area Atari show to this date. A bright future was in store for this group. But times started getting tough.

Newsletter costs began increasing. Money was starting to get short, even after Atari Magic show profits. Memberships weren't renewing, reflecting a national trend. At the end of '88 our contract for meeting rooms was to expire. Our '89 contract featured an increase of rates and the possibility of getting bumped out with no prior notice.

The "Partners In Education" program, sponsored by the Warren Consolidated School District (WCSD), was the answer to many of our problems. Although designed primarily for the business sector, WCSD found MAGIC ideal, too. Teaching people how to use computers was a natural for us.

The key to "Partners In Education" is the Adopt-A-School program. It is based on partnership programs found in Massachusetts, California, Florida and Texas over the past 15 years. Although not an original idea, its implementation by coordinators Dennis Torp and Mary Harrants makes it a unique program.

When a business/organization adopts a particular school in WCSD, there are no wishy-washy verbal agreements that can get misconstrued or forgotten. The partnership is treated the same as a major merger between two companies. Everything is put in writing. Committees are formed on both sides with coordinators. Next, everything is spelled out to the letter of exactly what each side expects of the other.

The two entities develop needs lists based on realistic goals. MAGIC had needs and a wish list was developed, and our adopted school, Pearl Lean Elementary, had their needs. Theirs were initially simple: assistance for their media specialist (librarian) and in their computer lab. Ours, too, were simple: a place to meet regularly, receive our mail, to call our home. Once all terms were agreed upon, a formal signing ceremony of the adoption partnership took place.

Entering the program presented other challenges for MAGIC. We had to change our name slightly to better reflect

our new focus--doing that wasn't anything special. The computer used in the school is the Commodore 64/Pet--and that brought out some groans at first. Since then, members have been shown the basics of the C-64/Pet and seem relatively comfortable (or is that resigned?!). Environments may change, but concepts remain constant. "Any" exposure to computing is better than none at all, right?

Our partnership contract lasts for one year. Monthly reports are submitted, and at the end of the year, the partnership will be evaluated and a determination will be made whether it will be continued. Although our commitments are in a written contract, there is no liability or penalty incurred if we can't meet our obligation. Both parties merely separate and go their own ways. MAGIC doesn't foresee that happening, and looks forward to an ongoing relationship with WCSD.

As our relationship continues, we hope to add to our services for MAGIC members. A second business/officers meeting will be added, a local computer show with the district may be executed, and increased use of other district services will be implemented. As newsletter editor, I'm hoping to get the district to print and mail future issues of "The Sourcerer's Apprentice". Pearl Lean Elementary also sees growth of the relationship. Plans "on the table" include a mentor program allowing MAGIC members to work with talented and gifted students, and a program to increase computer literacy with senior citizens (who will then help to guide students in return).

Currently MAGIC enjoys the benefits of a rent-free location for meetings (even with free coffee provided--yeah!) and a stable place we can call home. The Partners In Education program also ties us in with other partners. For example, if we have a guest speaker coming in, the Holiday Inn (who has another school for a partner) could upgrade or cut costs of accommodations for us, its fellow partner. Other partners in the program include the Warren

Police Department, General Dynamics Corp., Detroit Edison, AARP, Bloomfield Savings, Universal Ambulance, and many others. It is certainly a diverse group, and more are being added monthly.

Is this a direction all Atari user groups should consider? No, because such partnership programs do not yet exist in all areas. Also, some user groups address a different agenda than ours and have different needs. But if you feel this program is attractive for you, your group, or your school district, contact MAGIC or WCSD for more information. ■

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BEYOND GEM!

Finding GEM Information and More on form_do
by Douglas Hodson



One of the most important elements in any programming task is the amount of information available to solve it. Knowing that information is available and where it can be found is equally as important. If you can't find information or don't know that pertinent information exist, you'll never get anything done, plain and simple. Trying to solve every problem yourself is far worse than a homework exercise, because not only is no credit given, you also end up wasting a **lot** of time. This is the reason I decided on the topic of GEM information. This is by no means an complete list of GEM tutorials, but rather some references to material I've found invaluable for understanding GEM operation.

Probably the most widely read C and GEM tutorial has been in ST-Log. The column is called C-manship and has been an ongoing tutorial starting from mid 1986 (when ST-Log was still an insert in Analog). Some of the best discussions on GEM window programming can be found in the July/August 87, September 87, April 88 and May 88 issues. I personally found these four issues to contain enough information to write your own GEM skeleton for manipulating the most complex window arrangements! If you haven't read these columns, get them, read them, wait a couple of days, read them again, then you will understand windows manipulations (or a least you'll think you will). The source code used throughout these columns is the standard source used in many GEM windowing applications, including many GEM applications in the PC environment! In fact it's also very similar to Macintosh window handling skeletons.

My favorite GEM column for covering the nitty-gritty is Tim Oren's "Professional GEM". The column is copyrighted by Antic Publishing, but can be downloaded via modem though the Compuserve Information Service. Here's a step by step procedure to locate it (I hate it when people tell me to get a file off a service I've never used, so here you are),

- 1) Find a friend that has a Compuserve account.
- 2) Log in.
- 3) Type "go atari" at the "!" prompt.
- 4) Enter the Atari ST Productivity Forum.
- 5) Enter the Libraries section.
- 6) Enter the Tutorials section
- 7) Enter the Download a file section
- 8) The file is called "PROGEM.ARC"
- 9) Downloading will begin (takes almost 40 minutes at 1200 baud).

This file contains all the Professional GEM columns in the series, there is a total of 18. Column #13 entitled "A New Form Manager" contains complete source code to replace form_do(). The new form_do() is more "powerful" and has some better features. For example, the parameters passed have been changed slightly. The starting edit field is now a pointer to a value, rather than the value itself. This means you don't want to use the resource header file define for that field, as it is not a pointer, instead use something like this,

```
/* declare pointer to first edit field */
int *edit_ptr;
/* assign this pointer to the first edit field */
```

```
/* assuming FIELD was defined in resource file */
*edit_ptr = FIELD;
/* make the call */
form_do(tree_addr.edit_ptr);
```

Note the use of the tree address parameter has not changed. So why the edit pointer change? The new form_do() uses this pointer to pass information back to you by modifying the variable *edit_ptr. What information? It passes the object number of the last edited field just before the dialog was terminated. This could be useful if you wanted to open the dialog again with the edit cursor placed in the last position edited!

The new form_do() does more than just that. As the mouse crosses objects that are selectable, the object will highlight indicating a valid selectable object (say a button) can be clicked upon. You now know how Double Click's software works (actually I really don't know if they use this scheme or not, but it looks the same).

After studying these two sets of code you will be programming like a pro (dare I say professional?) in no time. They are, in my opinion, the best sets of GEM tutorials I have found. By combining source code from both you can create a very professional looking program skeleton. There is one point to address concerning event message handling with both pieces of code. Each piece has it's own evt_multi() call. Evt_multi() if you remember is the GEM event wait routine. It waits for GEM to send an event to your program via a message pipe. When evt_multi() waiting for an event, your program is essentially locked until the appropriate event is triggered. So what?

Consider this situation. You have written a program that uses windows and dialogs. Your program pops open a couple of windows while running, then a dialog box is opened for user input for some process. After the dialog box is opened, the user does his thing, then finally an "exit" button is clicked upon to terminate the dialog. Now GEM sends your program all the redraw events required for YOU to clean up the screen.

You say "no problem I can use the routines I found in the 4 window columns mentioned earlier". The answer is of course, you can! But there's a catch. Go back to our example. Several windows are on screen, dialog box pops up, everything's ok, or is it? If you click on an EXIT button everything IS OK, but what if the routine that draws the dialog, draw another dialog in response to some EXIT button in the first? What happens to the redraw messages? You guessed it, they aren't processed because the form_do()'s evt_multi() is not paying any attention to them. The result, the old dialog is not cleaned off screen and the new one is drawn on top! After the routine that's drawing all these dialogs finishes, the redraw events will be processed in the normal manner, and the screen will be cleared. This problem has been eluded to by Tim Oren in column #13.

In order to solve this problem we need to gain a good understanding of events and see how to "force" a redraw manually. The other solution is to place all dialogs in windows? What do ya think? Until next month. ■

PUBLIC DOMAIN REPORT

by Alice Amore

FASTTALK - Are you a sysop? Have you been frustrated by callers who like to chat but can't type at a reasonable speed? Do you sit there twitching until they finally hit the return key a few times signaling that it's your turn to communicate? If so, you'll enjoy using FASTTALK. FASTTALK supposedly works with any BBS that can run outside programs, and with terminal programs that allow GEM and TOS programs to run within them. It runs in full duplex so that you can type while the other modem head is typing. Also, an on-screen clock is there to remind you that 3 hours is too much time to spend chatting about the price of cheese.

QUIKFIND, another nifty gotta-have from Darek Mihocka and Ignac A. Kolenko, allows you to locate groups of files using masks you define. Simply tell QUIKFIND which drive you'd like to search. Then type in the mask. A full listing of all files matching the mask will be printed to screen, printer, or disk file. (Be careful of the 40-folder limit! Use a folder-fix program to be sure.) Now there's no excuse for all those .BAK and .PRT files cluttering up your hard drive, is there? Root them out with QUIKFIND.

ADDBASE - Steve MacMillan has written ADDRESS BASE (ADDBASE) which is a dedicated address book program which can store up to 400 records. For many users, this program will nicely take the place of a full-fledged database. Entering data is easy. Click on ADD, type in the data hitting <RETURN> to advance to the next field, then save your record with Control-A. All records can be edited. Use UNDO to clear a line of data. The cursor keys can be used to jump around the fields, and the BACKSPACE and DELETE keys are active. The list of names and addresses can be scrolled a record at a time. You can browse your list starting at any letter of the alphabet by clicking on the appropriate letter button. There is also a "fast scroll", but you cannot use the editor in the fast mode. Searches are easy, and hitting Control-N will take you to the next search string. A searched subset may be saved to disk. One nice aspect of ADDRESS BOOK is that you can actually read your raw data from the desktop. The typical database doesn't allow that feature.

MANUAL MAKER (version 2.20) - The newest version of MANUAL MAKER can definitely be

considered a major piece of ST shareware. For starters, this program is large, full of features, and highly user-configurable. But even more important is the fact that there exists a genuine need for such a program. And the more you use it, the more uses you'll find for it.

MANUAL MAKER transforms any ASCII file into an 8 1/2" by 5 1/2" professional-looking manual. To use MANUAL MAKER, you must have either GDOS or G+PLUS. Also necessary are GDOS fonts and printer drivers.

At long last, I was able to print out the manual using my Epson compatible. I was highly impressed with the results. MANUAL MAKER saves gobs of paper by prompting you to turn the paper over so that you can use both sides. Later, it's a simple matter to "assemble" the pages and staple down the middle. The printing is done sideways-fashion in graphics mode which allows for attractive formats using a variety of fonts to set off headings and emphasize various page areas. Pages are numbered automatically. There is even a feature which lets you design a cover for your manual.

MANUAL MAKER was developed by Craig W. Daymon using Laser C from Megamax. It is being distributed as shareware, and part of your registration fee will be donated to the American Diabetes Association. Mr. Daymon is interested in seeing the results of your efforts (newsletters, catalogs, etc.) and requests that you send him the more interesting creations. He also welcomes your feedback on features you'd like to see. Registered users will be notified when new versions are released.

GDOS HELP - The ins and outs of GDOS can be confusing, especially for the new ST user. To help out, there's "Everything You Ever Wanted to Know About GDOS (And More)", an excellent text file written by Douglas N. Wheeler. GDOS is an extension to GEM which adds new capabilities to your ST's performance. It is included with many Atari programs, and is also available to Atari developers, for a fee, to be included in commercial programs. If you need to know more about GDOS, read D.N. Wheeler's text. Better yet, get the preformatted version of the text (filename: GDOS.MAN) which can be used with MANUAL2.2 to print out the file in manual form.

MICROMAX is another in a series of mind-blowing, lots-o'-graphics-STuff-on-the-screen-at-once-plus-digitized-sound demos. This one comes to us from MicroDeal, UK, but the file has been altered by Matt Kennedy to enhance the graphics even more, and to add music from The Art of Noise.

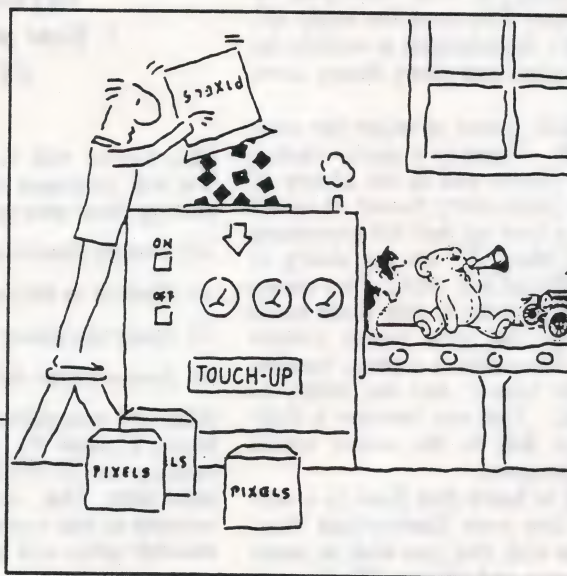
JOTTO, a favorite word-guessing game, is the work of Steve Schneider. The computer thinks of a word and, using the process of elimination, you have to guess it. Type any five-letter word (only "real" words are allowed, but the process is on the honor system, since no dictionary exists) and the program tells you how many "matches" have been made between your word and the computer's word. By changing your letters one at a time and comparing them against the computer's word, you try to end up (after 30 guesses) matching the computer's word. This is not a fast game, since most of your time will be spent thinking. Source code is included. ■

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SPECTRE HINTS

by WK Whitton

With the release of the new software update for the Spectre 128, namely version 1.9F, a world of new applications have been opened to us. The addition of audio capabilities makes this an even more enjoyable experience, and yet at the very same time brings to light numerous other problems. With this in mind, I will write this column in order to hopefully spare you some of the grief I have been through!

First and foremost! If you are using Soundmaster, especially the CDEV version, by all means, **DO NOT** use System/Finder 6.0. Things are extremely unstable. I have found that 5.3 is probably the latest rock-stable System/Finder you can use with out any problems, and still enjoy the new audio capabilities of your Spectre.

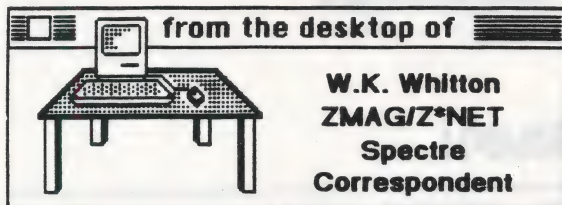
If you should use Soundmaster, and then attempt to do **ANY** disk operations, "unsitting", or what have you, by all means hit the "Escape" key first! This turns the audio off, and speeds things up dramatically! Soundmaster is terrible for leaving the sound on after its finished, and slows things down to a crawl!

The Audio program I have grown to enjoy the most is a little gem called "Mac CD". There is a demo version available up on the Mac RT on Genie, and in the library of numerous Mac user group. This plays every format of sound file for the Mac that I was able to turn up, and did something else that really made it shine. "Mac CD" has the ability to draw audio files from within a HyperCard stack! This means you do not have to use Hypercard in order to play these audio jewels! This is a savings in time that only floppy owners could appreciate (loading time). Since this is a demo version, the ability to save a file in new format, and the ability to record a file have been disabled. You can procure a fully functional version by sending in \$40 to the author whose name and address appears in the program.

You might be interested to know that there is a neat little "Label-Maker" built right into your Spectre-ized Mac! Open the directory window of the disk that you wish to make a label for. Go to the "View" menu and choose "By Name". Next, size the window until you achieve the approximate size of your current disk label. Now print the screen by holding down "Shift-Control-Caps Lock-4". Use Scotch tape to attach the paper to your disk, or use full page sized labels and trim to size.

If you had to open a bevy of folders to run the current application you are in, you can take the short-cut back to the root directory by holding down your "Alternate" key until the menu bar appears after quitting an application.

If you wish to protect sensitive data, simply erasing the file is not enough. Copy another file directly on top of where your sensitive file used to be, and then it will be gone permanently. ■



Z*NET CONTEST

by Ron Kovacs

ATTN: ST*ZMAG, Z*NET, and ST-WORLD Readers!!

In conjunction with ST-WORLD Magazine, we are offering our readers a contest which will award over \$100.00 in prizes.

What you need!

March and April 1989 edition of ST-World Magazine.

Within the two ST-WORLD issues stated above, find the crossword puzzle included within the issue. All you have to do is solve the puzzle and return your answers via email or post card. The **FIRST** correct answer received will win the following.

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This contest will end after the correct answers are received. We will announce the winner here in ST*ZMAG and in our message base area on GENie, and in ST-WORLD Magazine.

All answers should contain the following:

- 1). Number in the puzzle and your answer for each.
- 2). Name and phone number so we can contact you.
- 3). Issue number the puzzle is from.

After the completion of this contest, the NEW contest will begin. Contest #2, the Find Your Number Contest, will be running in ST-WORLD, Z*NET, and ST*ZMAG. Special note here: This contest ran in 1988 in ST-WORLD. All entrants in that contest are valid for this one. At least a \$50.00 monthly prize will be given away.

All that is required is that you send off a post card for your own number. Then look for your number in any of the above magazines. You will have 30 days to locate the number which will be run weekly in ST*ZMAGAZINE. When you locate your number, call (503) 673-2259 and claim your prize. Next month, look for the specific details in Z*NET.

Here is the mailing addresses for both contests. Send to either:

**ST-WORLD/ZMAG CONTEST
1385 Cleveland Loop Drive
Roseburg, Oregon 97479-9622**

**Z*NET c/o Rovac Ind, Inc.
Post Office Box 74
Middlesex, NJ 08846-0074**

SIG HARTMANN ENTERTAINS USER GROUP

by Robert Brodie

Atari Corporation appeared at the general meeting of the North Orange County Computer Club (NOCCC) in Orange, California in March. The NOCCC is one of the largest computer clubs on the west coast, boasting a membership of over 2000. This club does not specialize in any particular computer, but has numerous sigs for each particular machine, going the gamit of Atari XL, Atari ST, IBM, Apple, Mac, Amiga, Commodore 64 and more. The general meeting attracted a crowd of approximately 350, mostly IBM users.

Atari was represented by Sig Hartmann, and a new face: Joe Mendola, VP of the Desk Top Publishing Marketing. Sig spoke to the group about the plans that Atari has laid out to address the specialty market areas of desk top publishing and midi, and talked in depth about the specifics of the ST. Vince Giammatteo showed the group two new commercials on video tape that Atari plans to air, comparing the Mega ST4 to a Mac and IBM. One of the commercials makes light of the expensive competitors by suggesting that the logos are the really expensive part of the machine. Surprisingly, the Mac/PC group got a good laugh out of that!! He wooed the group when he showed the Mega ST4 desk top publishing system, telling them the system would list at retail for \$3999, including the Publisher ST software from Timeworks.

Joe Mendola spent a lot of time showing off Calamus for the group. Using the Mega ST4, Megafile 30 hard drive, and an SLM804 Laser printer, he showed the group some of the advanced features that Calamus has. One of the clubs officers, a devoted Mac dtp user was floored to hear that she could copy whole pages with Calamus, something apparently not available in her Mac dtp program. I have to admit, when he was asked to print the sample page that Calamus comes with, the Atarians in the crowd sent up a silent prayer. It was answered less than 50 seconds later when the laser put out the beautifully printed page! The crowd was ****really**** impressed! More than one was heard to comment that the page with the space shuttle drawing on it would have taken much longer to print on their printer. Then he showed UltraScript, the postscript clone by Imagen (a division of QMS). While some of Ultra Script's demos seemed to take a while, they afforded a chance for a question and answer period. As the session went on, the Atari reps passed around the UltraScript printouts for the members to inspect. Many of the questions centered around Atari's description of the SLM804 as a "postscript compatible" laser printer.

Sig continued to stress that Atari was making a big push in the US this year. The dram shortage is easing (locally at computer swap meets the chips are available for about \$12-\$16!). However, they are also committed to maintaining their status as the standard computer in Germany. Sig acknowledged that Atari has sent product to Europe rather than the US because the sales were there. "It makes no sense to advertise product in the US that you cannot provide..." he

said. Atari is also interested in signing up more dealers. Sig told the group that if they knew of a dealer that they thought might like to carry the Atari line, to contact him directly and he would sign the dealer up!!

After the general meeting, local Atari dealers were showing product in another room, giving the club members a chance to try the ST hands on. Mid Cities Com-Soft from Bellflower, CA was showing Cricit, an inventory control, bar code reader and cash register program, while Computer Games Plus from Orange, CA was showing games and a new video digitizer called VIDI-ST. This digitizer operates in low rez, using 16 gray scales. Grabs video from moving video in 1/50th second. Animates frames at up to 25 per second, holding up to 24 frames on a 1040, more on a Mega ST! This was a great opportunity to show the Atari Mega ST line to a group that might not have entered an Atari dealership. The majority of the group left impressed, and talking about how cost effective the Mega line seemed to be. ■

ONLINE REPORT

by Ron Kovacs

Interesting things are taking place with our online offerings. Last month we told you about our new ZMAG editor, Harold Brewer and the change to our original format of 40 columns, atascii. ZMAG is available on CompuServe and GENie in the ATARI8 areas on each. ST*ZMAG is also available on both services. To find us on CompuServe, type GO ATARIARTS then DL 15. On GENie, we have our message base area, CAT 31, and the magazines are in the download library.

Once again we offer Z*NET readers a special CompuServe \$15.00 sign-up offer. If you are interested, send a post card with your name and address to Z*NET COMPUSERVE OFFER, C/O Rovac Industries, PO Box 74, Middlesex, NJ 08846-0074. Please allow 4-6 weeks for delivery.

Within this issue are details on a new contest we are offering in cooperation with ST-WORLD Magazine. Look for more details next month here, or read more in ST*ZMAGAZINE.

A new publication day has been announced for ST*ZMAG. We are releasing this magazine every Friday evening. Look for them any Friday after 9pm EDT. Recent topics we have covered: Public Domain Shelf, Spectre Hints, Latest Atari news, technical articles, and many other regular features. We encourage you to read the latest news every week.

Last month's issue had an inadvertant typographical error that may have caused a few problems for some people. We incorrectly reported the number to dial up to get on-line to GENie for sign-up. The correct number is 1-800-638-8369. As soon as it connects, type HHH and press return. You should be prompted with "U#=". At this prompt, type XJM11887,ATARI then hit return. Then you can register for a new GENie account. We apologize for any inconveniences caused by the error.

This month ZMAG begins it's 4th year of weekly publication. Look for a special anniversary issue on the services.

Thanks for reading and supporting these publications! ■



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AB Zoo	21	Cyber Paint	48
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Air Ball	26	Dark Castle	27
Air Ball Construction Set	17	Data Manager ST	46
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Autoduel	24	Dr. Keys (DR T)	19
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Bubble Ghost	24	First Shapes	25
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★ ST SOFTWARE ★

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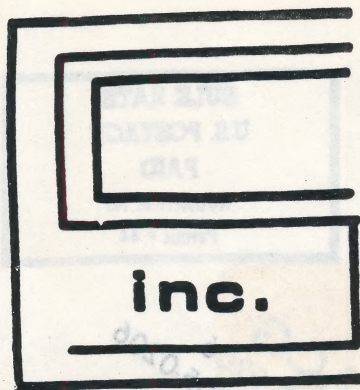
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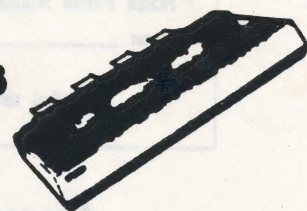
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